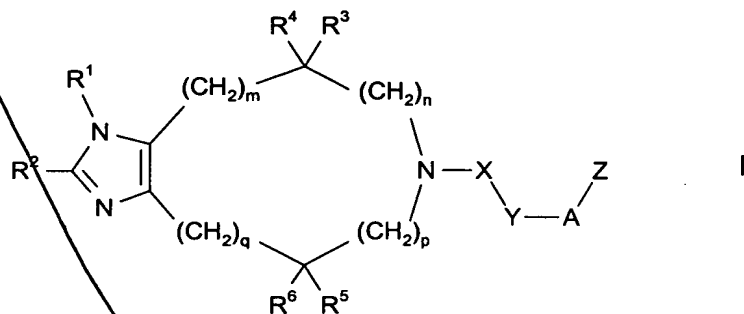


What is claimed is:

1. A compound of formula I



wherein

R¹ is hydrogen or a functional group, which can be converted to hydrogen *in vivo*;

R² is hydrogen, C<sub>1-6</sub>-alkyl, halogen, cyano, trifluoromethyl, trifluoromethoxy, hydroxy or -NR⁷R⁸,

wherein R⁷ and R⁸ independently are

hydrogen,

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

C<sub>1-6</sub>-alkylsulfonyl optionally substituted with

C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or

R<sup>7</sup> and R<sup>8</sup>, together with the nitrogen atom to which they are connected, form a 3 to 8-membered, saturated or unsaturated, heterocyclic ring optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> independently are

hydrogen, carboxy, C<sub>1-6</sub>-alkoxycarbonyl, cyano, trifluoromethyl, halogen,

C<sub>3-8</sub>-cycloalkyl optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

C<sub>1-6</sub>-alkyl, C<sub>2-6</sub>-alkenyl or C<sub>2-6</sub>-alkynyl, which are optionally substituted with

C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, cyano, halogen, trifluoromethyl, trifluoromethoxy, carboxy, C<sub>1-6</sub>-alkoxycarbonyl,

C<sub>3-8</sub>-cycloalkyl, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or -CO-NR<sup>9</sup>R<sup>10</sup>,

aryl optionally substituted with

halogen, cyano, nitro, C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, hydroxy, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aryloxy, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or -CO-NR<sup>9</sup>R<sup>10</sup>,

-CO-NR<sup>9</sup>R<sup>10</sup>,

wherein R<sup>9</sup> and R<sup>10</sup> independently are

hydrogen,

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

C<sub>1-6</sub>-alkylsulfonyl optionally substituted with

C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or

R<sup>9</sup> and R<sup>10</sup>, together with the nitrogen atom to which they are connected, form a 3 to 8 membered, saturated or unsaturated, heterocyclic ring optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or

R<sup>3</sup> and R<sup>4</sup>, together with the carbon atom to which they are connected, and/or R<sup>5</sup> and R<sup>6</sup> together with the carbon atom to which they are connected, form a 3 to 8-membered, saturated or unsaturated, carbocyclic or heterocyclic ring optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

m, n, p and q independently are 0, 1 or 2;

X is a valence bond, -CH<sub>2</sub>-, -C(=O)-, -C(=S)-, -S(=O)-, -S(=O)<sub>2</sub>-, -C(=N-CN)-, -C(=CH-NO<sub>2</sub>)-, -C[=C(CN)<sub>2</sub>]-, -C(=CH-CN)-, -C(=NR<sup>11</sup>)- or -C(=N-S(=O)<sub>2</sub>R<sup>11a</sup>)-,

wherein R<sup>11</sup> is

hydrogen,

C<sub>1-6</sub>-alkyl optionally substituted with

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aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-  
amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino,  
di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl,  
heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or het-  
eroaryl-amino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are  
optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino,  
di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl,  
heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino,

C<sub>1-6</sub>-alkylsulfonyl optionally substituted with

C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino,  
di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl,  
heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino;

R<sup>11a</sup> is

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-  
amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino,  
di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy,  
aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or het-  
eroaryl-amino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are  
optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

5 Y is a valence bond, -O- or -N(R<sup>12</sup>)-,

wherein R<sup>12</sup> is

hydrogen,

10

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

15

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

20

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

25

C<sub>1-6</sub>-alkylsulfonyl optionally substituted with

C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

30

A is a valence bond, C<sub>1-6</sub>-alkylene, C<sub>2-6</sub>-alkenylene, C<sub>2-6</sub>-alkynylene, C<sub>3-8</sub>-cycloalkylene or phenylene, or

when Y is -N(R<sup>12</sup>)-, A, together with R<sup>12</sup> and the nitrogen atom to which they are connected, may form a 3 to 8-membered, saturated or unsaturated, heterocyclic ring system optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aryl-C<sub>1-6</sub>-alkyl, heteroaryl-C<sub>1-6</sub>-alkyl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino; and

Z is -R<sup>13</sup>, -OR<sup>13</sup>, -SR<sup>13</sup>, -NR<sup>13</sup>R<sup>14</sup>, -CHR<sup>13</sup>R<sup>14</sup>, -CR<sup>13</sup>R<sup>14</sup>R<sup>15</sup> or =CR<sup>13</sup>R<sup>14</sup>,

wherein R<sup>13</sup>, R<sup>14</sup> and R<sup>15</sup> independently are

hydrogen,

C<sub>1-6</sub>-alkyl, C<sub>2-6</sub>-alkenyl or C<sub>2-6</sub>-alkynyl, which are optionally substituted with aryl, arylamino, heteroarylamino, aroyl, heteroaroyl, arylsulfonyl, C<sub>1-6</sub>-alkylsulfonyl, sulfonylamino, arylthio, heteroarylthio, aryloxy, acylamino, heteroaryl or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, aryl-C<sub>1-6</sub>-alkyl, heteroaryl-C<sub>1-6</sub>-alkyl, nitro, arylamino, heteroarylamino, aroyl, heteroaroyl, arylsulfonyl, heteroarylsulfonyl, C<sub>1-6</sub>-alkylsulfonyl, sulfonylamino, arylthio, heteroarylthio, aryloxy, acylamino, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethoxy or trifluoromethyl,

aryl, C<sub>3-15</sub>-cycloalkyl, C<sub>3-15</sub>-cycloalkenyl, C<sub>3-15</sub>-cycloalkynyl, aroyl or heteroaryl, which are optionally substituted with

aryl-C<sub>1-6</sub>-alkyl, heteroaryl-C<sub>1-6</sub>-alkyl, aryl, heteroaryl, nitro, arylamino, heteroarylamino, aroyl, heteroaroyl, arylsulfonyl, heteroarylsulfonyl, C<sub>1-6</sub>-alkylsulfonyl, sulfonylamino, arylthio, heteroarylthio, aryloxy, acylamino, C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, C<sub>3-8</sub>-cycloalkanecarbonyl, hydroxy,

oxy or trifluoromethyl, where

$R^{13}$  and  $R^{14}$  or  $R^{13}$ ,  $R^{14}$  and  $R^{15}$ , when they do not represent hydrogen, m joined by one or more bridging linkers such as a valence bond,  $C_{1-4}$ -alkyl,  $C_{2-4}$ -alkenylene, -O-, -S-, -N( $R^{16}$ )-, -C(=O)-, -S(=O)-, -S(=O)<sub>2</sub>-, -C( $R^{16}$  $R^{17}$ )-, phenylene, biphenylene, -O- $C_{1-4}$ -alkylene, -S- $C_{1-4}$ -alkylene, -N( $R^{16}$ )- $C_{1-4}$ -N- $C_{1-4}$ -alkylene, -O- $C_{2-4}$ -alkenylene, -S- $C_{2-4}$ -alkenylene or -N( $R^{16}$ )- $C_{2-4}$ -alkenylene, to form a mono-, bi- or polycyclic ring system,

wherein  $R^{16}$  and  $R^{17}$  independently are

hydrogen,

$C_{1-6}$ -alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or  $C_{3-8}$ -cycloalkyl, which are optionally substituted with  $C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-4}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroaryl-sulfonyl, which are optionally substituted with

$C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino,

$C_{1-6}$ -alkylsulfonyl optionally substituted with

$C_{3-8}$ -cycloalkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-4}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy,

wherein R<sup>16</sup> and R<sup>17</sup> independently are

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

**C<sub>1-6</sub>-alkylsulfonyl optionally substituted with**

~~C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkyl-  
amino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoro-~~



methoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or

$R^{16}$  and  $R^{17}$ , together with the nitrogen atom to which they are connected, form a 3 to 8 membered, saturated or unsaturated, heterocyclic ring optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with  $C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

provided that

when X is -CS-,  $R^1 = R^2 = R^5 = R^6 =$  hydrogen,  $m = n = p = 0$  and  $q = 1$ , the group -Y-A-Z must not start with the radical -NH-;

when the group -X-Y-A-Z starts with the radical -CH<sub>2</sub>-,  $R^1 = R^2 = R^6 =$  hydrogen,  $m = n = p = 0$  and  $q = 1$ ,  $R^5$  must not be carboxy or aminocarbonyl;

when X is -CO-, the group -Y-A-Z starts with the radical -NH-,  $R^1 = R^2 = R^6 =$  hydrogen,  $m = n = p = 0$  and  $q = 1$ , the remainder of the group -Y-A-Z must not be hydrogen, unsubstituted or  $C_{1-6}$ -alkoxy substituted phenyl, unsubstituted  $C_{3-8}$ -cycloalkyl or unsubstituted  $C_{1-6}$ -alkyl;

when X is -CO-, Y is -O-, A is -CH<sub>2</sub>-, Z is phenyl,  $R^1 = R^2 = R^3 = R^4 = R^6 =$  hydrogen,  $m = n = p = 0$  and  $q = 1$ ,  $R^5$  must not be carboxy, aminocarbonyl or 4-phenylpiperazin-1-ylcarbonyl;

when X is -CO-, Y is -O-, A is -CH<sub>2</sub>-, Z is phenyl,  $R^1 = R^3 = R^4 = R^6 =$  hydrogen,  $R^2 =$  butyl,  $m = n = p = 0$  and  $q = 1$ ,  $R^5$  must not be methoxycarbonyl;

- when X is -CO-, Y is -O-, A is -CH<sub>2</sub>-, Z is phenyl, R<sup>1</sup> = R<sup>2</sup> = R<sup>4</sup> = R<sup>5</sup> = R<sup>6</sup> = hydrogen, m = n = p = 0 and q = 1, R<sup>3</sup> must not be hydrogen, ethyl, isopropyl or phenyl;
- when X is -CO-, Y is -O-, A is a valence bond, Z is *tert*-butyl, R<sup>1</sup> = R<sup>2</sup> = R<sup>3</sup> = R<sup>4</sup> = R<sup>6</sup> = hydrogen, m = n = p = 0 and q = 1, R<sup>5</sup> must not be carboxy;
- when X is -CO-, Y is -O-, A is a valence bond, Z is *tert*-butyl, R<sup>1</sup> = R<sup>2</sup> = R<sup>4</sup> = R<sup>5</sup> = R<sup>6</sup> = hydrogen, m = n = p = 0 and q = 1, R<sup>3</sup> must not be 4-cyanophenyl;
- when X is -CO-, the group -Y-A-Z starts with the radical -O-, R<sup>1</sup> = R<sup>2</sup> = R<sup>6</sup> = hydrogen, m = n = p = 0 and q = 1, R<sup>5</sup> must not be carboxy, aminocarbonyl or hydrogen;
- when -X is -CO-, the group -Y-A-Z starts with the radical -CH<, R<sup>1</sup> = R<sup>2</sup> = R<sup>3</sup> = R<sup>4</sup> = R<sup>6</sup> = hydrogen, m = n = p = 0 and q = 1, R<sup>5</sup> must not be hydroxymethyl, C<sub>1-6</sub>-alkoxy-carbonyl or carboxy; and
- when X is -CO-, the group -Y-A-Z is 4-methoxyphenyl, R<sup>1</sup> = R<sup>2</sup> = R<sup>3</sup> = R<sup>4</sup> = R<sup>6</sup> = hydrogen, m = n = p = 0 and q = 1, R<sup>5</sup> must not be carboxy;
- as well as any optical or geometric isomer or tautomeric form thereof or a pharmaceutically acceptable salt thereof.

2. A compound of claim 1 wherein R<sup>1</sup> = R<sup>2</sup> = hydrogen.
3. A compound of claim 1, wherein m = n = p = 0; and q = 1.
4. A compound of claim 1, wherein n = p = 0; and m = q = 1.
5. A compound of claim 1, wherein X is a valence bond, -C(=O)-, -S(=O)<sub>2</sub>-, -C(=N-CN)-, -C(=CH-NO<sub>2</sub>)- or -C(=N-S(=O)<sub>2</sub>R<sup>11a</sup>)-, wherein R<sup>11a</sup> is as defined in claim 1.
6. A compound of claim 5, wherein X is -C(=O)-.

- 5/13/20

17. A compound of claim 10, wherein Z is  $-\text{CHR}^{13}\text{R}^{14}$ , in which  $\text{R}^{13}$  is  $\text{C}_{1-6}$ -alkyl or phenyl and  $\text{R}^{14}$  is phenyl, or  $\text{R}^{13}$  and  $\text{R}^{14}$  are both  $\text{C}_{1-6}$ -alkyl which are joined with  $\text{C}_{1-4}$ -alkylene linkers to form a polycarbocyclic ring system.

18. A compound of claim 10, wherein Z is  $-\text{CR}^{13}\text{R}^{14}\text{R}^{15}$ , in which  $\text{R}^{13}$ ,  $\text{R}^{14}$  and  $\text{R}^{15}$  are  $\text{C}_{1-6}$ -alkyl which are joined with  $\text{C}_{1-4}$ -alkylene linkers to form a polycarbocyclic ring system.

19. A compound of claim 18, wherein Z is adamantyl.

20. A compound of claim 1, wherein  $\text{R}^3$  and  $\text{R}^4$  independently are

hydrogen;

$\text{C}_{3-8}$ -cycloalkyl optionally substituted with  $\text{C}_{1-6}$ -alkyl,  $\text{C}_{1-6}$ -alkoxy,  $\text{C}_{1-6}$ -alkylthio, hydroxy, amino,  $\text{C}_{1-6}$ -alkylamino, di( $\text{C}_{1-6}$ -alkylamino), halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

$\text{C}_{1-6}$ -alkyl optionally substituted with

$\text{C}_{3-8}$ -cycloalkyl, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino which are optionally substituted with

$\text{C}_{1-6}$ -alkyl,  $\text{C}_{1-6}$ -alkoxy,  $\text{C}_{1-6}$ -alkylthio, hydroxy, amino,  $\text{C}_{1-6}$ -alkylamino, di( $\text{C}_{1-6}$ -alkylamino), halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl optionally substituted with

halogen, cyano, nitro,  $\text{C}_{1-6}$ -alkyl,  $\text{C}_{1-6}$ -alkoxy, hydroxy, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aryloxy, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or  $-\text{CO}-\text{NR}^9\text{R}^{10}$ , wherein  $\text{R}^9$  and  $\text{R}^{10}$  are as defined in claim 1, or

R<sup>3</sup> and R<sup>4</sup>, together with the carbon atom to which they are connected, form a C<sub>3-8</sub>-cycloalkyl ring optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkylamino), halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino.

21. A compound of claim 20, wherein R<sup>3</sup> and R<sup>4</sup> are both hydrogen or are both C<sub>1-6</sub>-alkyl, or R<sup>3</sup> and R<sup>4</sup>, together with the carbon atom to which they are connected, form a C<sub>3-8</sub>-cycloalkyl ring, or one of R<sup>3</sup> and R<sup>4</sup> is hydrogen while the other is C<sub>3-8</sub>-cycloalkyl substituted C<sub>1-6</sub>-alkyl.

22. A compound of claim 1, wherein R<sup>5</sup> and R<sup>6</sup> are both hydrogen.

15 23. A compound of claim 1, wherein R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are hydrogen.

24. A compound of claim 1, wherein  $R^1 = R^2 =$  hydrogen;  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are hydrogen; X is  $-C(=O)-$ ; Y is  $-N(R^{12})-$ , wherein  $R^{12}$  and A, together with the nitrogen atom to which they are connected, form a 3 to-8 membered, saturated or unsaturated, heterocyclic ring system optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with  $C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkylamino), halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aryl- $C_{1-6}$ -alkyl, heteroaryl- $C_{1-6}$ -alkyl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino; and Z is  $-R^{13}$ , wherein  $R^{13}$  is hydrogen.

25. A compound of claim 1, wherein R<sup>1</sup> = R<sup>2</sup> = hydrogen; R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are hydrogen; X is -C(=N-CN)-, -C(=CH-NO<sub>2</sub>)- or -C(=N-S(=O)<sub>2</sub>R<sup>11a</sup>)-, wherein R<sup>11a</sup> is C<sub>1-6</sub>-alkyl or phenyl substituted with C<sub>1-6</sub>-alkyl; Y is -NH-; A is C<sub>1-8</sub>-alkylene; and Z is -R<sup>13</sup>, wherein R<sup>13</sup> is C<sub>1-6</sub>-alkyl, aryl, C<sub>3-15</sub>-cycloalkyl, C<sub>3-15</sub>-cycloalkenyl, aroyl or heteroaryl, which are optionally substituted as defined in claim 1.

26. A compound of claim 1, wherein  $R^1 = R^2 =$  hydrogen;  $R^3, R^4, R^5$  and  $R^6$  are hydrogen; X is  $-S(=O)_2-$ ; Y is a valence bond; A is a valence bond or  $C_{1-8}$ -alkylene; and Z is  $-R^{13}$ , wherein  $R^{13}$  is  $C_{1-6}$ -alkyl, aryl,  $C_{3-15}$ -cycloalkyl,  $C_{3-15}$ -cycloalkenyl, aroyl or heteroaryl, which are optionally substituted as defined in claim 1.

27. A compound of claim 1, wherein  $R^1 = R^2 =$  hydrogen;  $R^3, R^4, R^5$  and  $R^6$  are hydrogen; X is  $-C(=O)-$ ; Y is  $-N(R^{12})-$ , wherein  $R^{12}$  is hydrogen or  $C_{1-6}$ -alkyl; A is a valence bond or  $C_{1-8}$ -alkylene; and Z is  $-R^{13}$ , wherein  $R^{13}$  is  $C_{1-6}$ -alkyl, aryl,  $C_{3-15}$ -cycloalkyl,  $C_{3-15}$ -cycloalkenyl, aroyl or heteroaryl, which are optionally substituted as defined in claim 1.

28. A compound of claim 1, wherein  $R^1 = R^2 =$  hydrogen;  $R^3, R^4, R^5$  and  $R^6$  are hydrogen; X is  $-C(=O)-$ ; Y is  $-O-$ ; A is a valence bond or  $C_{1-8}$ -alkylene; and Z is  $-R^{13}$ , wherein  $R^{13}$  is  $C_{1-6}$ -alkyl, aryl,  $C_{3-15}$ -cycloalkyl,  $C_{3-15}$ -cycloalkenyl, aroyl or heteroaryl, which are optionally substituted as defined in claim 1.

29. A compound of claim 1, wherein  $R^1 = R^2 =$  hydrogen;  $R^3, R^4, R^5$  and  $R^6$  are hydrogen; X is  $-C(=O)-$ ; Y is a valence bond; A is a valence bond or  $C_{1-8}$ -alkylene; and Z is  $-R^{13}$ , wherein  $R^{13}$  is  $C_{1-6}$ -alkyl, aryl,  $C_{3-15}$ -cycloalkyl,  $C_{3-15}$ -cycloalkenyl, aroyl or heteroaryl, which are optionally substituted as defined in claim 1.

30. A compound of claim 25, wherein Z is  $C_{1-6}$ -alkyl, phenyl, naphthyl, thienyl, cyclopentyl, cyclohexyl, cyclohexenyl, oxazolyl, indanyl, isoquinolyl, benzoyl or tetrahydronaphthyl which are optionally substituted as defined in claim 1.

31. A compound of claim 30, wherein Z is phenyl or cyclohexyl, which are optionally substituted as defined in claim 1.

32. A compound of claim 25, wherein Z is unsubstituted or substituted with one to three substituents selected from  $C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy, halogen, phenyl,  $di(C_{1-6}$ -alkyl)amino,  $C_{3-8}$ -cyclopropanecarbonyl, trifluoromethoxy and trifluoromethyl.

33. A medicament comprising a compound of claim 1.

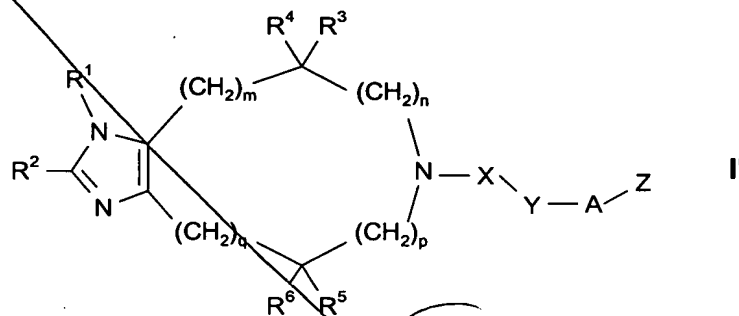
34. A pharmaceutical composition comprising, as an active ingredient, an effective amount of at least one compound of claim 1, together with one or more pharmaceutically acceptable carriers or diluents.

35. The pharmaceutical composition of claim 34 in unit dosage form, comprising from about 0.05 mg to about 1000 mg of the compound.

36. The pharmaceutical composition of claim 35 in unit dosage form, comprising from about 0.1 mg to about 500 mg of the compound.

37. The pharmaceutical composition of claim 36 in unit dosage form, comprising from about 0.5 mg to about 200 mg of the compound.

38. A medicament for treating or preventing disorders and diseases related to the histamine H3 receptor, the medicament comprising a compound of formula I'



wherein

R<sup>1</sup> is hydrogen or a functional group, which can be converted to hydrogen *in vivo*;

$R^2$  is hydrogen,  $C_{1-6}$ -alkyl, halogen, cyano, trifluoromethyl, trifluoromethoxy, hydroxy or  $-NR^7R^8$ ,

wherein  $R^7$  and  $R^8$  independently are

hydrogen,

$C_{1-6}$ -alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or  $C_{3-8}$ -cycloalkyl, which are optionally substituted with

$C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

$C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino,

$C_{1-6}$ -arylsulfonyl optionally substituted with

$C_{3-8}$ -cycloalkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino, or

$R^7$  and  $R^8$ , together with the nitrogen atom to which they are connected, form a 3 to 8 membered, saturated or unsaturated, heterocyclic ring optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with  $C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl,



trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

$R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  independently are

hydrogen, carboxy,  $C_{1-6}$ -alkoxycarbonyl, cyano, trifluoromethyl, halogen,

$C_{3-8}$ -cycloalkyl optionally substituted with

$C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

$C_{1-6}$ -alkyl,  $C_{2-6}$ -alkenyl or  $C_{2-6}$ -alkynyl, which are optionally substituted with

$C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, cyano, halogen, trifluoromethyl, trifluoromethoxy, carboxy,  $C_{1-6}$ -alkoxycarbonyl,

$C_{3-8}$ -cycloalkyl, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, which are optionally substituted with

$C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy,  $C_{1-6}$ -alkylthio, hydroxy, amino,  $C_{1-6}$ -alkylamino, di( $C_{1-6}$ -alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or  $-CO-NR^9R^{10}$ ,

aryl optionally substituted with

halogen, cyano, nitro,  $C_{1-6}$ -alkyl,  $C_{1-6}$ -alkoxy, hydroxy, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aryloxy, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or  $-CO-NR^9R^{10}$ ,

$-CO-NR^9R^{10}$ ,

wherein  $R^9$  and  $R^{10}$  independently are

**C<sub>1-6</sub>-alkyl optionally substituted with**

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

~~C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,~~

~~C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or~~

R<sup>9</sup> and R<sup>10</sup>, together with the nitrogen atom to which they are connected, form a 3 to 8-membered, saturated or unsaturated, heterocyclic ring optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or

R<sup>3</sup> and R<sup>4</sup>, together with the carbon atom to which they are connected, and/or R<sup>5</sup> and R<sup>6</sup> together with the carbon atom to which they are connected, form a 3 to 8-

membered, saturated or unsaturated, carbocyclic or heterocyclic ring optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

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m, n, p and q independently are 0, 1 or 2;

X is a valence bond, -CH<sub>2</sub>-, -C(=O)-, -C(=S)-, -S(=O)-, -S(=O)<sub>2</sub>-, -C(=N-CN)-, -C(=CH-NO<sub>2</sub>)-, -C[=C(CN)<sub>2</sub>]-, -C(=CH-CN)-, -C(=NR<sup>11</sup>)- or -C(=N-S(=O)<sub>2</sub>R<sup>11a</sup>)-,

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wherein R<sup>11</sup> is

hydrogen,

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C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

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C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

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C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

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C<sub>1-6</sub>-alkylsulfonyl optionally substituted with

C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

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R<sup>11a</sup> is

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

Y is a valence bond, -O- or -N(R<sup>12</sup>).

wherein R<sup>12</sup> is

hydrogen,

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroaryl-amino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

C<sub>1-6</sub>-alkylsulfonyl optionally substituted with

C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

A is a valence bond, C<sub>1-8</sub>-alkylene, C<sub>2-8</sub>-alkenylene, C<sub>2-8</sub>-alkynylene, C<sub>3-8</sub>-cycloalkylene or phenylene, or

when Y is -N(R<sup>12</sup>)-, A, together with R<sup>12</sup> and the nitrogen atom to which they are connected, may form a 3 to 8-membered, saturated or unsaturated, heterocyclic ring system optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aryl-C<sub>1-6</sub>-alkyl, heteroaryl-C<sub>1-6</sub>-alkyl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroaryl-amino; and

Z is -R<sup>13</sup>, -OR<sup>13</sup>, -SR<sup>13</sup>, -NR<sup>13</sup>R<sup>14</sup>, -CHR<sup>13</sup>R<sup>14</sup>, -CR<sup>13</sup>R<sup>14</sup>R<sup>15</sup> or =CR<sup>13</sup>R<sup>14</sup>,

wherein R<sup>13</sup>, R<sup>14</sup> and R<sup>15</sup> independently are

hydrogen,

C<sub>1-6</sub>-alkyl, C<sub>2-6</sub>-alkenyl or C<sub>2-6</sub>-alkynyl, which are optionally substituted with

aryl, arylamino, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, C<sub>1-6</sub>-alkylsulfonyl, sulfonylamino, arylthio, heteroarylthio, aryloxy, acylamino, heteroaryl or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with

C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, aryl-C<sub>1-6</sub>-alkyl, heteroaryl-C<sub>1-6</sub>-alkyl, nitro, arylamino, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, heteroarylsulfonyl, C<sub>1-6</sub>-alkylsulfonyl, sulfonylamino, arylthio, heteroarylthio, aryloxy, acylamino, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethoxy or trifluoromethyl,

aryl, C<sub>3-15</sub>-cycloalkyl, C<sub>3-15</sub>-cycloalkenyl, C<sub>3-15</sub>-cycloalkynyl, aroyl or heteroaryl, which are optionally substituted with

aryl-C<sub>1-6</sub>-alkyl, heteroaryl-C<sub>1-6</sub>-alkyl, aryl, heteroaryl, nitro, arylamino, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, heteroarylsulfonyl, C<sub>1-6</sub>-alkylsulfonyl, sulfonylamino, arylthio, heteroarylthio, aryloxy, acylamino, C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, C<sub>3-8</sub>-cycloalkanecarbonyl, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethoxy or trifluoromethyl, where

R<sup>13</sup> and R<sup>14</sup> or R<sup>13</sup>, R<sup>14</sup> and R<sup>15</sup>, when they do not represent hydrogen, may be joined by one or more bridging linkers such as a valence bond, C<sub>1-4</sub>-alkylene, C<sub>2-4</sub>-alkenylene, -O-, -S-, -N(R<sup>16</sup>)-, -C(=O)-, -S(=O)-, -S(=O)<sub>2</sub>-, -C(R<sup>16</sup>R<sup>17</sup>)-, phenylene, biphenylene, -O-C<sub>1-4</sub>-alkylene, -S-C<sub>1-4</sub>-alkylene, -N(R<sup>16</sup>)-C<sub>1-4</sub>-alkylene, -N=C<sub>1-4</sub>-alkylene, -O-C<sub>2-4</sub>-alkenylene, -S-C<sub>2-4</sub>-alkenylene or -N(R<sup>16</sup>)-C<sub>2-4</sub>-alkenylene, to form a mono-, bi- or polycyclic ring system,

wherein R<sup>16</sup> and R<sup>17</sup> independently are

hydrogen,

C<sub>1-6</sub>-alkyl optionally substituted with

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino, heteroarylamino or C<sub>3-8</sub>-cycloalkyl, which are optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl or heteroarylsulfonyl, which are optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino,

C<sub>1-6</sub>-alkylsulfonyl optionally substituted with C<sub>3-8</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino, or

R<sup>16</sup> and R<sup>17</sup>, together with the nitrogen atom to which they are connected, form a 3 to 8-membered, saturated or unsaturated, heterocyclic ring optionally containing one or more further heteroatoms selected from nitrogen, oxygen and sulfur, and optionally substituted with C<sub>1-6</sub>-alkyl, C<sub>1-6</sub>-alkoxy, C<sub>1-6</sub>-alkylthio, hydroxy, amino, C<sub>1-6</sub>-alkylamino, di(C<sub>1-6</sub>-alkyl)amino, halogen, cyano, trifluoromethyl, trifluoromethoxy, aryl, heteroaryl, aroyl, heteroaroyl, arylsulfonyl, arylamino or heteroarylamino;

as well as any optical or geometric isomer or tautomeric form thereof or a pharmaceutically acceptable salt thereof.

39. The medicament of claim 38, wherein an inhibition of the histamine H3 receptor has a beneficial effect.

40. The medicament of claim 38 which has H3 antagonistic action.

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41. A pharmaceutical composition comprising, as an active ingredient, an effective amount of at least one compound of claim 38, together with one or more pharmaceutically acceptable carriers or diluents.

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42. The pharmaceutical composition of claim 41 in unit dosage form, comprising from about 0.05 mg to about 1000 mg of the compound.

43. The pharmaceutical composition of claim 42 in unit dosage form, comprising from about 0.1 mg to about 500 mg of the compound.

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44. The pharmaceutical composition of claim 43 in unit dosage form, comprising from about 0.5 mg to about 200 mg of the compound.

45. A method of reducing weight comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

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46. A method of treating or preventing overweight or obesity comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

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47. A method for the suppression of appetite or satiety induction comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

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48. A method of treating or preventing disorders and diseases related to overweight or obesity comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

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sum  
a3

sub  
a4



49. A method of treating or preventing eating disorders comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

50. The method of claim 49, wherein the eating disorder is bulimia or binge eating.

51. A method of treating or preventing IGT comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

52. A method of treating or preventing Type 2 diabetes comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

53. A method of delaying or preventing the progression from IGT to Type 2 diabetes comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

54. A method of delaying or preventing the progression from non-insulin requiring Type 2 diabetes to insulin requiring Type 2 diabetes comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

55. A method of treating or preventing diseases and disorders related to the serotonin-3 receptor (5-HT<sub>3</sub>) comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

56. The method of claim 55, wherein the disorder is emesis.

57. A method of treating or preventing diseases and disorders related to the vanilloid receptor comprising administering to a subject in need thereof a pharmaceutical composition of claim 40.

58. The method of claim 57, wherein the disorder is pain, neurogenic inflammation or obesity.

5 60. A method of treating or preventing disorders or diseases related to the H3 histamine receptor, the method comprising administering to a subject in need thereof an effective amount of a compound of claim 38 or a pharmaceutical composition comprising this compound.

62. The method of claim 61, wherein the effective amount of the compound is from about 0.1 mg to about 1000 mg per day.

add  
as

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B1